

XXXII. *Descriptions of some new Exotic Species of Lucanidæ.* By J. O. WESTWOOD, Esq., M.A., F.L.S., &c.

[Read 7th Oct. 1861.]

THE following descriptions may be considered as supplemental to the different memoirs which I have from time to time published in these Transactions on various exotic species of *Lucanidæ* (Trans. Ent. Soc., N. S., iii. 197, &c.). The species here described are of small size, but they are not the less interesting, on account of the peculiarities of structure which they respectively exhibit, and which in several of the species are quite unique in respect to the characters of this family. To these species I have added figures of both sexes of a very interesting species, *Homoderus Mellyi*, from tropical Africa, which has been described by Major Parry. (See Journal of Proceedings of the Society for December, 1862.)

Ryssonotus? jugularis, Westw. (Plate XIV. fig. 1.)

R. niger, capite et pronoto nitidis, hoc et elytris purpureo-cupreis, pronoto mediocri angulis posticis emarginatis, elytris dilatatis, capitis lateribus ante oculos productis et truncatis, lobo jugulari deflexo, mento trigono. ♀?

Long. corp. cum mand. lin. 10; lat. pronoti lin. $4\frac{1}{2}$; lat. elytr. lin. $5\frac{2}{3}$.

Habitat Melbourne in Australia.

In Mus. Bakewell et Howitt.

This species is at once distinguished by its metallic hue, which, together with its general form, gives it somewhat the appearance of a female of the genus *Chiasognathus*, to which indeed it seems to be somewhat allied.

It is black, with the head and prothorax glossy; the elytra are almost opaque, except the sutural margin, which is polished; the prothorax and elytra have a purplish coppery tint, varying on the disc of the elytra to chesnut; the sides of the prothorax and the suture of the elytra are slightly æneous. The head is small, rugose and very irregular on the crown; in front of each eye is an elevated tubercle, and there are two others close together in the middle; towards the front margin the posterior lateral angles of the head are extended outwards beyond the eyes and are truncated.

The mandibles are about the length of the head, elongate-ovate ; concave, with two or three small rounded lobes on the upper margins. The maxillæ are simple, the upper lobe being triangular and strongly penicillated ; the palpi have the 2nd joint longer than the rest. The mentum is triangular, fixed on the fore-margin of a broad transverse deflexed projection of the jugulum, the anterior portion of the labium being hidden by the produced angle of the mentum. The antennæ are short, with the capitulum formed of the six terminal joints, which are moderately produced on their inner angles. The eyes are entirely divided by the broad truncated septum.

The prothorax is of moderate size, much broader than the head, but narrower than the middle portion of the elytra ; the anterior angles are rounded, but the posterior ones are obliquely emarginate ; the lateral margins are serrated and the disc has an impressed channel along the middle, a curved impression on each side behind the eyes, the sides deflexed and very rugose, and another impression on each side within the posterior angles extending towards the disc. The elytra are broad and convex, dilated beyond the middle, very delicately punctured, especially towards the sides ; the suture elevated and transversely and obliquely wrinkled. The legs are robust, the anterior tibiæ broad, with about six serratures at the base and two strong teeth at the extremity of the outer margin. The fore posterior tibiæ have two spines on the outer margin, one near the middle and the other towards the base. The body beneath is obscure black.

I am indebted to Robert Bakewell, Esq., F.L.S., for an opportunity of describing and figuring this remarkable insect, which I presume to be a female specimen. Since the above description was in type, Dr. Howitt has sent a drawing of another specimen to England from Australia.

Sinodendron? areolatum. (Pl. XIV. fig. 2.)

Cylindricum, punctatissimum, punctis variolosis, nitidum, prothorace antice angustato, disco areolis lævibus notato, elytris 4-subcostatis ; capitis disco semicirculo parvo nitido inter oculos instructo ; pedibus subelongatis. ♀.

Long. corp. lin. 6.

Habitat in Nova Zeelandia.

In Mus. Parry.

I have only seen a single female specimen of this species, the diagnosis of which is therefore for the present only provisional ;

indeed the want of the opposite sex, joined to the broken condition of the antennæ in the specimen which I have examined, leaves it doubtful whether it be rightly referred to the genus *Sinodendron*, with which it agrees in the porrected scapes on which the labial palpi are placed; but the palpi, both maxillary and labial, are much larger than in *S. cylindricum*.

The upper surface is very convex; black, polished, with the sides of the prothorax and elytra, and suture of the latter, obscure pitchy-red; covered with large, close, variolose, circular punctures, those at the sides of the prothorax and hind part of the elytra emitting whitish-buff scales. The head is small, transverse, narrowed in front, the crown having a small raised polished semicircular ridge in the middle, between the eyes. The eyes are entire: the clypeus is small and transverse, in front of which the small transverse labrum is affixed. The mandibles are very small, broad, sub-triangular, with three minute obtuse teeth at the apex. The maxillæ are small and penicillated; neither of the lobes are armed with a horny hook. The mentum is small, transverse, with the anterior angles rounded, clothed sparingly with long reflexed hairs; the fore-margin straight, having the small entire setose labium porrected at its centre, the labial palpi arising from two broad porrected scapes. The palpi (both maxillary and labial) are moderately long and slender. The basal joint of the antennæ is rather long and very curved. The prothorax is as broad at its base as the elytra, but its sides are gradually rounded and narrowing to the head; its lateral margins are finely serrated and the disc marked with an irregular, central, longitudinal, wide, polished line, and two elongated patches in front and two behind, rather raised and polished; the middle of the hind-margin is extended backwards toward the scutellum.

The elytra are very convex, about half as long again as they are wide, covered with punctures, each having four slightly defined longitudinal ridges, upon which the punctures are not so close as they are on the intervening depressed spaces. The legs are moderately long, the anterior tibiæ slender and curved, with thirteen irregular-sized denticulations, and with a strong spine near the apex, which also forms a curved spine. The intermediate and posterior tibiæ are armed with a central spine and several minute denticles. The body beneath is black, glossy, and less strongly punctured than on the upper surface.*

* See note, p. 437.

Mitophyllus Parrianus. (Pl. XV. fig. 3.)

Piceo-niger, nitidus, punctatus, squamis luteis tessellatus, mandibulis mediocribus, prope basin externe elevatis, denteque erecto subapicali armatis, antennarum capitulo mediocriter elongato. ♂.

Long. corp. lin. $5\frac{2}{3}$.

Habitat in Nova Zeelandia.

In Mus. D. Parry.

The head is sub-quadrata, black, very thickly and finely punctured in the hinder part; the front depressed and slightly excavated, separated from the hind part by a slightly-raised semicircular ridge between the eyes, terminating on each side in the porrected anterior angles of the head, immediately beneath which the antennæ are affixed. The eyes are large, round and entire. The antennæ are slender, 10-jointed; 1st joint long, covered with a few erect bristles in front, the 7th joint is sub-triangular, with several bristles starting from its apex; the three joints of the capitulum are of moderate length, chesnut-coloured, and clothed with fine pale pubescent hairs. The mandibles are not longer than half the length of the head, somewhat triangular, excavated above; the outer margin near the base elevated into an obtuse lobe, and the upper edge near the tip armed with an erect triangular tooth; they are black and glossy, with a few punctures and luteous bristles. The lobes of the maxillæ are not armed with a curved spine on the inner margin, the palpi are slender. The lower lip was unfortunately lost in the examination of the unique specimen.

The prothorax has the sides more strongly rounded than in *M. irroratus*, with all the angles acute, the margin slightly serrated, the disc irregularly punctured, having several smooth patches, especially down the middle and on each side behind; the disc on each side within the anterior angles is rather concave.

The elytra are convex, and closely punctured, each puncture emitting a luteous scale, the scales disposed in several longitudinal series connected together by several transverse irregular patches of scales; the intervening spaces less strongly punctured. The legs are slender; the anterior tibiæ with about fourteen minute obtuse serratures between the base and the tooth beyond the middle, and with about seven serratures between it and the apical external tooth. The middle and hind-tibiæ are armed with several very minute teeth, as well as with one more conspicuous in the middle of the outer margin. The body beneath is pitchy-black,

glossy, punctured, and sparingly squamose, with the jugulum chesnut-coloured.

This species is at once distinguished from *M. irroratus* by its more robust form and the shorter capitulum of its antennæ.

Ceratognathus punctatissimus, Westw. (Pl. XV. fig. 4.)

Oblongus, cylindricus, punctatissimus, niger; lateribus pronoti, elytris pedibusque fuscis; capite brevi, parvo, suprâ tuberculo bilobato armato; mandibulis capite longioribus, suprâ auriculatis; pronoto lateribus rotundato, et intra margines laterales depresso. ♂.

Long. corp. lin. $6\frac{1}{2}$.

Habitat in Nova Hollandia.

In Mus. Parry.

Of this species I have only seen a single male individual. It is slenderer in form and more elongate than *C.? mentiferus*, and is densely covered with minute punctures. It is black, with the sides of the prothorax, elytra and legs dark brown, and the antennæ pitchy. The head is small, the anterior angles are not prominent, but rounded, and the crown of the head is armed with a transverse bilobed tubercle. The mandibles are porrected, longer than the head, slightly curved, strongly bifid at the tip, and with two small conical projections near the tips; the upper edge is compressed into an erect rounded lobe or tooth; the inner margins fringed with bristles, set on transversely.

The maxillæ are minute, with the terminal lobe small, simple, conical, and strongly penicillated with hairs; the inner lobe is also minute, slender, and simple. The palpi are moderately long and slender, with the basal joint minute. The mentum is small, transverse, flat, with the anterior lateral angles rounded off; the labial palpi are slender, with the basal joint visible—they are inserted near the middle of the fore-margin of the mentum.

The antennæ are small, and the capitulum is composed of three moderately long branches. The prothorax is much wider than the head, transverse, with the lateral margins slightly rounded and finely serrated. The anterior margin is transversely elevated, and the sides are depressed within the lateral margins. The disc is thickly covered with minute punctures, and there is an impressed longitudinal line down the centre. The scutellum is small and semicircular. The elytra are oblong, rounded at the tip, thickly covered with small punctures, emitting fine setæ, and

each has about six slender elevated costæ. The legs are slender; the anterior tibiæ finely serrated, and armed with two teeth at the tip (the outer tooth forming the apex itself). The posterior tibiæ have a few minute spines on the outer margin, the apical outer angle being elongated and truncate.

Ceratognathus? mentiferus, Westw. (Pl. XV. fig. 5.)

C. brevis, subcylindricus, niger, parum nitidus et luteo-squamosus, dense punctatus; elytris tricostratis; capite tuberculo medio conico, mento deflexo cordiformi, oculis sinuatis. ♂.

Long. corp. lin. $5\frac{1}{2}$; mandib. lin. 1; lat. elytr. lin. $2\frac{1}{3}$.

Habitat Goulborn River (Nov. Holland.)

In Mus. D. Parry.

Short, robust, subcylindrical; black, slightly glossy, thickly punctured, slightly clothed with small luteous scales. Head transverse, the anterior angles produced, elevated and truncated, the space between their angles (or front margin) somewhat emarginate; the clypeus vertical, subtriangular, rounded at the tip, which meets the emargination of the mentum and shuts the mouth. The middle of the disc of the head is armed with a single, conical, obtuse tubercle; the eyes are sinuated in the middle, both in front and behind.

The antennæ have the basal joint long and slender, the six following very short, and the three terminal ones produced on the inside into long, slender, setose branches, almost equal in length to the entire antennæ.

The mandibles are porrected, rather longer than the head, rather slender; with a strong obtuse tooth near the middle of the inner margin, and a smaller one between it and the apical tooth, which is bifid.

The maxillæ are very small, with a very minute apical lobe, somewhat triangular, obtuse at the tip, and covered with long hairs; the inner lobe simple; the maxillary palpi are moderately long and slender. The mentum forms a large deflexed lobe, somewhat heart-shaped, strongly punctured, setose, deeply impressed down the middle and notched at its base.

The prothorax is transversely quadrate, with the anterior angles rounded and the hind ones slightly emarginate; its upper surface is marked with several polished impunctate patches, and a clear, slender line along the middle, and four round impressions in a row nearly across the transverse centre. The elytra are short, rounded at the tip, punctate, each having three longitudinal,

slightly raised, smooth costæ, destitute of punctures, as is also the raised suture. The scutellum is elongate-ovate, pointed at the tip and punctured.

The underside of the body is black, shining, punctured and clothed with luteous setæ.

The legs are rather slender, the anterior tibiæ finely serrated, and armed with one tooth on the outside near the tip, which is also produced into a terminal tooth. The posterior tibiæ are also finely serrated, the intermediate ones armed with a minute tooth on the outside near the apex, which is also acutely pointed, and the posterior ones have the outer apical angle produced and truncated at the tip.

I have only seen a single individual of this curious species, which in general form and structure of its antennæ approaches the genus *Ceratognathus*, but the remarkable formation of its mentum and sinuate eyes differ so much from the type of that genus that I do not doubt that some of our "go-a-head," "know nothing" Entomologists will make it the type of a distinct genus.

Dorcus adspersus, Bohemann, Ins. Caffr. 2, 384.

(Pl. XVI. fig. 6.)

D. parvus, convexus, opacus, punctatus, niger, dense et irregulariter luteo-squamosus et tessellatus, pronoto anticè tuberculis tribus minutis in triangulum dispositis. ♀.

Long. corp. lin. $5\frac{1}{4}$.

Habitat in Natalia.

In Mus. Parry et Mniszech.

Opaque, black, convex, thickly clothed with luteous scales arising from the punctures on the disc, leaving irregular dark patches. The head is small and unarmed, the hinder portion narrowed and punctate, the anterior angles obliquely truncate. The labrum is produced and semicircular; the mandibles small, and acutely bifid at the tips. The eyes slightly incised by the lateral septum; the antennæ short; the capitulum small, rounded and 3-jointed; the maxillæ with the terminal lobe ovate, and strongly penicillated, the inner lobe armed with a strong, curved hook. The mentum is broader than long, with the anterior angles rounded; the labial lobes concealed, but furnished with long projecting hairs. All the palpi are short, the terminal joint being the largest. The prothorax is broad, convex, rounded at the sides, with three small raised tubercles near the middle of the fore-margin, arranged in a triangle (* * *); the disc is variegated

with irregular oval patches of pale scales, the middle of the disc having a broad central dark patch. The scutellum is semicircular and slightly impressed. The elytra are convex, rounded behind, as broad as the middle of the prothorax, luteous, with several longitudinal dark patches towards the base, a transverse series of shorter ones across the middle, and several more obscure ones towards the apex. The legs are rather slender; the fore-tibiæ are irregularly serrated and armed with two strong teeth at the tip, and the four posterior tibiæ are armed beyond the middle with a small spine.

The body beneath is black, shining and slightly clothed with short luteous hairs arising from the punctures. The pectus is canaliculated.

Prof. Bohemann does not state the sex of the specimens which he has described. That in the collection of Major Parry, from which I have derived my figure, appears to be a female.

DESCRIPTION OF THE FIGURES.

PLATE XIV.

Fig. 1—1 e.

Ryssonotus? jugularis, and details:—

Fig. 1. The insect magnified; 1 a, the head and prothorax seen from beneath; 1 b, the mandibles seen from above; 1 c, the eyes, jugulum and mentum seen laterally; 1 d, the maxilla; 1 e, the mentum and labial palpi.

Fig. 2—2 d.

Sinodendron? areolatum, and details:—

Fig. 2. The insect magnified; 2 a, clypeus, labrum and mandibles; 2 b, the tip of the mandibles seen laterally; 2 c, the maxilla; 2 d, the mentum, labium and labial palpi.

PLATE XV.

Fig. 3—3 d.

Mitophyllus Parrianus, and details:—

Fig. 3. The insect magnified; 3 a, the mandibles seen from above; 3 b, the mandible seen sideways; 3 c, the maxilla; 3 d, the antenna.

Fig. 4—4 d.

Ceratognathus punctatissimus, and details:—

Fig. 4. The insect magnified; 4 a, the mandible; 4 b, the maxilla; 4 c, the mentum and labial palpi; 4 d, the antenna.

Fig. 5—5 e.

Ceratognathus? mentiferus, and details:—

Fig. 5. The insect magnified; 5 a, the head seen sideways; 5 b, the labrum,

base of the mandibles, mentum and palpi seen from front ; 5 *c*, the maxilla ; 5 *d*, the mentum and labial palpus ; 5 *e*, the antenna.

PLATE XVI.

Fig. 6—6 *e*.

Dorcus adspersus, and details :—

Fig. 6. The insect magnified ; 6 *a*, the mentum, external bases of the maxillæ, palpi and mandibles closed ; 6 *b*, the maxilla ; 6 *c*, the mentum and labial palpi ; 6 *d*, the antenna ; 6 *e*, the fore-tibia.

Fig. 7—7 *h*.

Homoderus Mellyi, Parry. Male.

Fig. 7. The insect of the natural size ; 7 *a*, the right side of the head seen from above ; 7 *b*, the underside of the head, with the mentum and labium removed, showing the maxilla, base of mandibles and base of antennæ ; 7 *c*, the maxilla ; 7 *d*, the mentum ; 7 *e*, the labium and labial palpi ; 7 *f*, the eye ; 7 *g*, the terminal joints of the antennæ ; 7 *h*, the middle tibia.

Fig. 8—8 *e*.

Homoderus Mellyi, Parry. Female.

Fig. 8. The female of the natural size ; 8 *a*, the labrum and mandibles ; 8 *b*, the mentum ; 8 *c*, the extremity of the antennæ ; 8 *d* and 8 *e*, the extremity of the fore-tibia.

Note.—It has been suggested to me that the insect described at p. 430, under the name of *Sinodendron ? areolatum*, may be identical with *Ceratognathus Helotoides* of Mr. Thomson's recently published Treatise on *Lucanidæ* ; but the insect I have described does not even belong to the same sub-family as *Ceratognathus*, and it has not the most remote resemblance to a *Helota*. If it should nevertheless prove identical, I contend that such unintelligible nomenclature and description disqualify the retention of Mr. Thomson's name.—J. O. W., *Jan.* 1863.
